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Sequence Listing was accepted.

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217-9197 (toll free).

Reviewer: Anne Corrigan

Timestamp: [year=2009; month=6; day=26; hr=12; min=12; sec=15; ms=269; ]

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Application No: 10799514 Version No: 2.0

**Input Set:****Output Set:**

**Started:** 2009-06-17 17:29:48.673  
**Finished:** 2009-06-17 17:29:51.805  
**Elapsed:** 0 hr(s) 0 min(s) 3 sec(s) 132 ms  
**Total Warnings:** 23  
**Total Errors:** 0  
**No. of SeqIDs Defined:** 23  
**Actual SeqID Count:** 23

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W 213	Artificial or Unknown found in <213> in SEQ ID (2)
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W 213	Artificial or Unknown found in <213> in SEQ ID (4)
W 213	Artificial or Unknown found in <213> in SEQ ID (5)
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W 213	Artificial or Unknown found in <213> in SEQ ID (16)
W 213	Artificial or Unknown found in <213> in SEQ ID (17)
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W 213	Artificial or Unknown found in <213> in SEQ ID (19)
W 213	Artificial or Unknown found in <213> in SEQ ID (20)

**Input Set:**

**Output Set:**

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Error code

Error Description

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# SEQUENCE LISTING

<110> Spertini, et al.

<120> ALLERGEN PEPTIDE FRAGMENTS AND USE THEREOF

<130> 30985/41486A

<140> 10799514

<141> 2004-03-12

<150> 11/226,162

<151> 2005-09-14

<150> 60/455,004

<151> 2000-03-14

<150> 10/799,514

<151> 2004-03-12

<150> PCT/IB04/01300

<151> 2004-03-15

<160> 23

<170> PatentIn version 3.5

<210> 1

<211> 60

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic Peptide

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Gly	Pro	Asn	Glu	Leu	Gly	Arg	Phe	Lys	His	Thr	Asp	Ala	Cys	Cys	Arg
		20					25					30			

Thr	His	Asp	Met	Cys	Pro	Asp	Val	Met	Ser	Ala	Gly	Glu	Ser	Lys	His
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<211> 53

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic Peptide

<400> 2

Lys His Gly Leu Thr Asn Thr Ala Ser His Thr Arg Leu Ser Cys Asp  
1 5 10 15

Cys Asp Asp Lys Phe Tyr Asp Tyr Leu Lys Asn Ser Ala Asp Thr Ile  
20 25 30

Ser Ser Tyr Pro Val Gly Lys Met Tyr Phe Asn Leu Ile Asp Thr Lys  
35 40 45

Cys Tyr Lys Leu Glu  
50

<210> 3

<211> 45

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic Peptide

<400> 3

Leu Ile Asp Thr Lys Cys Tyr Lys Leu Glu His Pro Val Thr Gly Cys  
1 5 10 15

Gly Glu Arg Thr Glu Gly Arg Cys Leu His Tyr Thr Val Asp Lys Ser  
20 25 30

Lys Pro Lys Val Tyr Gln Trp Phe Asp Leu Arg Lys Tyr  
35 40 45

<210> 4

<211> 134

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic Peptide

<400> 4

Ile Ile Tyr Pro Gly Thr Leu Trp Cys Gly His Gly Asn Lys Ser Ser  
1 5 10 15

Gly Pro Asn Glu Leu Gly Arg Phe Lys His Thr Asp Ala Cys Cys Arg  
20 25 30

Thr His Asp Met Cys Pro Asp Val Met Ser Ala Gly Glu Ser Lys His  
35 40 45

Gly Leu Thr Asn Thr Ala Ser His Thr Arg Leu Ser Cys Asp Cys Asp  
50 55 60

Asp Lys Phe Tyr Asp Cys Leu Lys Asn Ser Ala Asp Thr Ile Ser Ser  
65 70 75 80

Tyr Phe Val Gly Lys Met Tyr Phe Asn Leu Ile Asp Thr Lys Cys Tyr  
85 90 95

Tyr Leu Glu His Pro Val Thr Gly Cys Gly Glu Arg Thr Glu Gly Arg  
100 105 110

Cys Leu His Tyr Thr Val Asp Lys Ser Lys Pro Lys Val Tyr Gln Trp  
115 120 125

Phe Asp Leu Arg Lys Tyr  
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<210> 5

<211> 125

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic Peptide

<400> 5

Met Gly Val Phe Asn Tyr Glu Thr Glu Ala Thr Ser Val Ile Pro Ala  
1 5 10 15

Ala Arg Leu Phe Lys Ala Pro Ile Leu Asp Gly Asp Asn Leu Phe Pro  
20 25 30

Lys Val Ala Pro Gln Ala Ile Ser Ser Val Glu Asn Ile Glu Gly Asn  
35 40 45

Gly Gly Pro Gly Thr Ile Lys Lys Ile Ser Phe Pro Glu Gly Phe Pro  
50 55 60

Phe Lys Tyr Val Lys Asp Arg Val Asp Glu Val Asp His Thr Asn Phe  
65 70 75 80

Lys Tyr Asn Tyr Ser Val Ile Glu Gly Gly Pro Ile Gly Asp Thr Leu  
85 90 95

Glu Lys Ile Ser Asn Glu Ile Lys Ile Val Ala Thr Pro Asp Gly Gly  
100 105 110

Ser Ile Leu Lys Ile Ser Asn Lys Tyr His Thr Lys Gly  
115 120 125

<210> 6

<211> 80

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic Peptide

<400> 6

Lys Tyr Asn Tyr Ser Val Ile Glu Gly Gly Pro Ile Gly Asp Thr Leu  
1 5 10 15

Glu Lys Ile Ser Asn Glu Ile Lys Ile Val Ala Thr Pro Asp Gly Gly  
20 25 30

Ser Ile Leu Lys Ile Ser Asn Lys Tyr His Thr Lys Gly Asp His Glu  
35 40 45

Val Lys Ala Glu Gln Val Lys Ala Ser Lys Glu Met Gly Glu Thr Leu  
50 55 60

Leu Arg Ala Val Glu Ser Tyr Leu Leu Ala His Ser Asp Ala Tyr Asn  
65 70 75 80

<210> 7

<211> 160

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic Peptide

<400> 7

Met Gly Val Phe Asn Tyr Glu Thr Glu Ala Thr Ser Val Ile Pro Ala  
1 5 10 15

Ala Arg Leu Phe Lys Ala Phe Ile Leu Asp Gly Asp Asn Leu Phe Pro  
20 25 30

Lys Val Ala Pro Gln Ala Ile Ser Ser Val Glu Asn Ile Glu Gly Asn  
35 40 45

Gly Gly Pro Gly Thr Ile Lys Lys Ile Ser Phe Pro Glu Gly Phe Pro  
50 55 60

Phe Lys Tyr Val Lys Asp Arg Val Asp Glu Val Asp His Thr Asn Phe  
65 70 75 80

Lys Tyr Asn Tyr Ser Val Ile Glu Gly Gly Pro Ile Gly Asp Thr Leu  
85 90 95

Glu Lys Ile Ser Asn Glu Ile Lys Ile Val Ala Thr Pro Asp Gly Gly  
100 105 110

Ser Ile Leu Lys Ile Ser Asn Lys Tyr His Thr Lys Gly Asp His Glu  
115 120 125

Val Lys Ala Glu Gln Val Lys Ala Ser Lys Glu Met Gly Glu Thr Leu  
130 135 140

Leu Arg Ala Val Glu Ser Tyr Leu Leu Ala His Ser Asp Ala Tyr Asn  
145 150 155 160

<210> 8

<211> 70

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic Peptide

<400> 8

Met Ser Trp Gln Thr Tyr Val Asp Glu His Leu Met Ser Asp Ile Asp  
1 5 10 15

Gly Gln Ala Ser Asn Ser Leu Ala Ser Ala Ile Val Gly His Asp Gly  
20 25 30



Ser Val Trp Ala Gln Ser Ser Ser Phe Pro Gln Phe Lys Pro Gln Glu  
35 40 45

Ile Thr Gly Ile Met Lys Asp Phe Glu Glu Pro Gly His Leu Ala Pro  
50 55 60

Thr Gly Leu His Leu Gly  
65 70

<210> 9

<211> 73

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic Peptide

<400> 9

His Leu Ala Pro Thr Gly Leu His Leu Gly Gly Ile Lys Tyr Met Val  
1 5 10 15

Ile Gln Gly Glu Ala Gly Ala Val Ile Arg Gly Lys Lys Gly Ser Gly  
20 25 30

Gly Ile Thr Ile Lys Lys Thr Gly Gln Ala Leu Val Phe Gly Ile Tyr  
35 40 45

Glu Glu Pro Val Thr Pro Gly Gln Ser Asn Met Val Val Glu Arg Leu  
50 55 60

Gly Asp Tyr Leu Ile Asp Gln Gly Leu  
65 70

<210> 10

<211> 133

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic Peptide

<400> 10

Met Ser Trp Gln Thr Tyr Val Asp Glu His Leu Met Ser Asp Ile Asp  
1 5 10 15

Gly Gln Ala Ser Asn Ser Leu Ala Ser Ala Ile Val Gly His Asp Gly  
20 25 30

Ser Val Trp Ala Gln Ser Ser Ser Phe Pro Gln Phe Lys Pro Gln Glu  
35 40 45

Ile Thr Gly Ile Met Lys Asp Phe Glu Glu Pro Gly His Leu Ala Pro  
50 55 60

Thr Gly Leu His Leu Gly Gly Ile Lys Tyr Met Val Ile Gln Gly Glu  
65 70 75 80

Ala Gly Ala Val Ile Arg Gly Lys Lys Gly Ser Gly Gly Ile Thr Ile  
85 90 95

Lys Lys Thr Gly Gln Ala Leu Val Phe Gly Ile Tyr Glu Glu Pro Val  
100 105 110

Thr Pro Gly Gln Ser Asn Met Val Val Glu Arg Leu Gly Asp Tyr Leu  
115 120 125

Ile Asp Gln Gly Leu  
130

<210> 11

<211> 81

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic Peptide

<400> 11

Thr Asn Ala Cys Ser Ile Asn Gly Asn Ala Pro Ala Glu Ile Asp Leu  
1 5 10 15

Arg Gln Met Arg Thr Val Thr Pro Ile Arg Met Gln Gly Gly Cys Gly  
20 25 30

Ser Cys Trp Ala Phe Ser Gly Val Ala Ala Thr Glu Ser Ala Tyr Leu  
35 40 45

Ala Tyr Arg Asn Gln Ser Leu Asp Leu Ala Glu Gln Glu Leu Val Asp  
50 55 60

Cys Ala Ser Gln His Gly Cys His Gly Asp Thr Ile Pro Arg Gly Ile  
65 70 75 80

Glu

<210> 12

<211> 86

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic Peptide

<400> 12

Ser Gln His Gly Cys His Gly Asp Thr Ile Pro Arg Gly Ile Glu Tyr  
1 5 10 15

Ile Gln His Asn Gly Val Val Gln Glu Ser Tyr Tyr Arg Tyr Val Ala  
20 25 30

Arg Glu Gln Ser Cys Arg Arg Pro Asn Ala Gln Arg Phe Gly Ile Ser  
35 40 45

Asn Tyr Cys Gln Ile Tyr Pro Pro Asn Val Asn Lys Ile Arg Glu Ala  
50 55 60

Leu Ala Gln Thr His Ser Ala Ile Ala Val Ile Ile Gly Ile Lys Asp  
65 70 75 80

Leu Asp Ala Phe Arg His  
85

<210> 13

<211> 86

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic Peptide

<400> 13

Ala Ile Ala Val Ile Ile Gly Ile Lys Asp Leu Asp Ala Phe Arg His  
1 5 10 15

Tyr Asp Gly Arg Thr Ile Ile Gln Arg Asp Asn Gly Tyr Gln Pro Asn  
 20 25 30

Tyr His Ala Val Asn Ile Val Gly Tyr Ser Asn Ala Gln Gly Val Asp  
 35 40 45

Tyr Trp Ile Val Arg Asn Ser Trp Asp Thr Asn Trp Gly Asp Asn Gly  
 50 55 60

Tyr Gly Tyr Phe Ala Ala Asn Ile Asp Leu Met Met Ile Glu Glu Tyr  
 65 70 75 80

Pro Tyr Val Val Ile Leu  
 85

<210> 14  
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 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic Peptide

<400> 14

Thr Asn Ala Cys Ser Ile Asn Gly Asn Ala Pro Ala Glu Ile Asp Leu  
 1 5 10 15

Arg Gln Met Arg Thr Val Thr Pro Ile Arg Met Gln Gly Gly Cys Gly  
 20 25 30

Ser Cys Trp Ala Phe Ser Gly Val Ala Ala Thr Glu Ser Ala Tyr Leu  
 35 40 45

Ala Tyr Arg Asn Gln Ser Leu Asp Leu Ala Glu Gln Glu Leu Val Asp  
 50 55 60

Cys Ala Ser Gln His Gly Cys His Gly Asp Thr Ile Pro Arg Gly Ile  
 65 70 75 80

Glu Tyr Ile Gln His Asn Gly Val Val Gln Glu Ser Tyr Tyr Arg Tyr  
 85 90 95

Val Ala Arg Glu Gln Ser Cys Arg Arg Pro Asn Ala Gln Arg Phe Gly  
 100 105 110

Ile Ser Asn Tyr Cys Gln Ile Tyr Pro Pro Asn Val Asn Lys Ile Arg  
115 120 125

Glu Ala Leu Ala Gln Thr His Ser Ala Ile Ala Val Ile Ile Gly Ile  
130 135 140

Lys Asp Leu Asp Ala Phe Arg His Tyr Asp Gly Arg Thr Ile Ile Gln  
145 150 155 160

Arg Asp Asn Gly Tyr Gln Pro Asn Tyr His Ala Val Asn Ile Val Gly  
165 170 175

Tyr Ser Asn Ala Gln Gly Val Asp Tyr Trp Ile Val Arg Asn Ser Trp  
180 185 190

Asp Thr Asn Trp Gly Asp Asn Gly Tyr Gly Tyr Phe Ala Ala Asn Ile  
195 200 205

Asp Leu Met Met Ile Glu Glu Tyr Pro Tyr Val Val Ile Leu  
210 215 220

<210> 15

<211> 72

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic Peptide

<400> 15

Asp Gln Val Asp Val Lys Asp Cys Ala Asn His Glu Ile Lys Lys Val  
1 5 10 15

Leu Val Pro Gly Cys His Gly Ser Glu Pro Cys Ile Ile His Arg Gly  
20 25 30

Lys Pro Phe Gln Leu Glu Ala Val Phe Glu Ala Asn Gln Asn Thr Lys  
35 40 45

Thr Ala Lys Ile Glu Ile Lys Ala Ser Ile Asp Gly Leu Glu Val Asp  
50 55 60

Val Pro Gly Ile Asp Pro Asn Ala

<210> 16

<211> 73

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic Peptide

<400> 16

Ser Ile Asp Gly Leu Glu Val Asp Val Pro Gly Ile Asp Pro Asn Ala  
1 5 10 15

Cys His Tyr Met Lys Cys Pro Leu Val Lys Gly Gln Gln Tyr Asp Ile  
20 25 30

Lys Tyr Thr Trp Asn Val Pro Lys Ile Ala Pro Lys Ser Glu Asn Val  
35 40 45

Val Val Thr Val Lys Val Met Gly Asp Asp Gly Val Leu Ala Cys Ala  
50 55 60

Ile Ala Thr His Ala Lys Ile Arg Asp  
65 70

<210> 17

<211> 136

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic Peptide

<400> 17

Leu Val Ala Ala Val Ala Arg Asp Gln Val Asp Val Lys Asp Cys Ala  
1 5 10 15

Asn His Glu Ile Lys Lys Val Leu Val Pro Gly Cys His Gly Ser Glu  
20 25 30

Pro Cys Ile Ile His Arg Gly Lys Pro Phe Gln Leu Glu Ala Val Phe  
35 40 45

Glu Ala Asn Gln Asn Thr Lys Thr Ala Lys Ile Glu Ile Lys Ala Ser  
50 55 60

Ile Asp Gly Leu Glu Val Asp Val Pro Gly Ile Asp Pro Asn Ala Cys  
65 70 75 80

His Tyr Met Lys Cys Pro Leu Val Lys Gly Gln Gln Tyr Asp Ile Lys  
85 90 95

Tyr Thr Trp Asn Val Pro Lys Ile Ala Pro Lys Ser Glu Asn Val Val  
100 105 110

Val Thr Val Lys Val Met Gly Asp Asp Gly Val Leu Ala Cys Ala Ile  
115 120 125

Ala Thr His Ala Lys Ile Arg Asp  
130 135

<210> 18

<211> 195

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic Peptide

<400> 18

Met Gly Val Phe Asn Tyr Glu Thr Glu Ala Thr Ser Val Ile Pro Ala  
1 5 10 15

Ala Arg Leu Phe Lys Ala Phe Ile Leu Asp Gly Asp Asn Leu Phe Pro  
20 25 30

Lys Val Ala Pro Gln Ala Ile